Report Sharing in RCRAInfo

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General Notes on Sharing Reports in RCRAInfo

"Shared Reports" Explained

The Office of Solid Waste will develop national reports for the use of all Headquarters employees, as well as State and Regional partners. OSW encourages States and Regions to develop reports on their own and share them, thereby expanding the number of reports available to the RCRAInfo user community.

In order to ensure that the reports created by one State or Region works for another partner, RCRAInfo shared reports should be implemented on the platform supported by National Technology Services Division (NTSD). The platform supported by NTSD is Oracle Reports Server 6i; therefore, both national and shared reports hosted with OSW resources must be developed using Oracle Reports 6i.

After a State or Region has developed a report utilizing the RCRAInfo database, they may determine that the report has benefits for other EPA partners. When such a report is identified, the developer can request that the report be added to the RCRAInfo Shared Reports Library.

What tool do I use?

OSW has supplied each Region and State with a copy of Oracle Reports 6.0. Developers can upgrade this package to Reports 6i, or they can develop using version 6.0 while NTSD maintains platform support.

The Oracle Reports software package is currently the only reporting package that will be supported by OSW and NTSD.

How can other users interact with my report?

The theme of RCRAInfo is "desktop access through the web." In keeping with that theme, each State or Regional partner that develops a report to be shared must use the Internet as its method of access. This means that you can use Hypertext Markup Language (HTML), Active Server Pages (ASPs), or other web languages to build web pages that contain "forms" that pass parameters to the Report Definition File (RDF) that is built by Oracle Reports 6.0.

Of course, you must have the independent ability to host the developed web pages at the State or Regional level. OSW cannot be responsible for hosting web pages for shared reports. OSW will, however, accept the responsibility of hosting and making available the RDF available over the RCRAInfo infrastructure.

How will users get to my reports?

From the main RCRAInfo reports web page, OSW will create hyperlinks to your State or Region's web site. When a user leaves the RCRAInfo reports page, they will exit the RCRAInfo system and be sent to your site.

The web pages that you have developed will contain specific information (report parameters) that is sent to the EPA web server hosting the reports. Your report will then be executed and the results passed back to the user.

Can I make my source code available to other Partners?

Yes, you can. After all, there is no need to reinvent the wheel. When a report from the user community is submitted as a Shared Report, the source code (RDF) will be stored in the RCRAInfo source code download area.

What do I need to build shared reports?

1) A copy of Oracle Reports 6.0 / 6i.

2) An HTML development package.

Just as the State or Region will be developing their own reports, they must also develop the user interface. The interface will be responsible for passing the report parameters to the Reports developed Report Definition File (RDF) which is hosted on the EPA servers run by NTSD.

OSW is not recommending or requiring the use of a specific package. Some examples include Allaire Homesite and Frontpage 2000. A simple text editor can also be used to develop HTML.

Similarly, OSW is not mandating a "look and feel" of how each Region or State's web page should look. Obviously, we'd like to see some notice on the web page (or an intro page) informing users that the data being retrieved is from RCRAInfo to distinguish us from other EPA databases (e.g., Envirofacts).

3) Web Space on a local server.

Each Region and State must be able to host its own web pages.

There are no special requirements that would mandate that NTSD or OSW should have responsibility for Region and State pages, including security concerns. The Reports server will handle user ID and password concerns.

4) Email or an EPA TSSMS account.

OSW is taking the responsibility for ensuring that the Region and State developed RDFs are made available to the entire user community from one central location. The developing Region or State must, however, email the RDF to the designated OSW representative for deployment.

How does the Reports Server handle my user id and password?

The EPA maintained reports derive your user id and password from the session that you have established with RCRAInfo. However, the once a user has chosen to execute a report developed by a Region or State Partner, that session is broken.

The Region or State report parameter page must query the user for his user id, password, and database. The database value can be built into the form using hidden parameters or through the use of a JavaScript procedure.

Disclaimer

Nothing stated here precludes the development of internally used Regional and State reports to access RCRAInfo data. Nothing precludes a Region or State from placing these reports (possibly queries developed through Access or Approach or another package) on a web page for download by other users right next to RCRAInfo compatible reports. OSW will not, however, recommend these reports as being "shared" since they cannot be run over the Internet through currently support NTSD applications or servers.

Summary

In short, each Region or State will be entirely responsible for developing, debugging, and maintaining their reports. They will also have all responsibility for the web pages that enable users to supply parameters and run the reports. OSW hosts the RDFs as a convenience to the user community, eliminating the need for each Region or State to maintain a copy of the RCRAInfo database or to have to go to the considerable expense of building a reporting environment.

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Developing Shared Reports

Create a Report Definition File

The developer should create a Report Definition File (RDF) and test it thoroughly via a client-server connection to ensure that it achieves desired results.

Please refer to Oracle documentation / courses to learn how to create an RDF. Occasionally at national user conferences OSW will conduct training classes to teach elementary design and development concepts.

Build a Web Page for Pre-production

Using a text editor or HTML development program, create a web page that includes all necessary “user selection criteria” (parameters) to run the report. Examples might include Location, Handler ID, Handler Name, Corrective Action Event Code, etc.

The most important thing to remember is the ACTION attribute of the <FORM> tag. It must appear like this:

```
<form name="paramForm"
action="https://orareport.rtpnc.epa.gov/cgi-bin/rwcgircra" method="POST">
```

The ACTION attribute tells the web form where to go to execute the next page or function. The METHOD attribute will instruct the form to hide all information passed, including the user ID and password. The other option for METHOD, GET, will show all parameters in the web browser’s location bar.

You must now include several hidden variables in the web page’s FORM tag. They are:

```
<input type="hidden" name="hidden_run_parameters" value="rcraprekey">
<input type="hidden" name="userid" value="userID/password@rcra">
<input type="hidden" name="destype" value="cache">
<input type="hidden" name="desformat" value="pdf">
<input type="hidden" name="report" value="reportname.rdf">
```

Briefly, the HIDDEN_RUN_PARAMETERS tells the report server which queue to execute the report on, production or pre-production. DESTYPE tells the report server to use cache to hold the data, while DESFORMAT tells the report server what type of output is required. The remaining two parameters, USERID and REPORT, are specific to the report being run. The developer must pass the user’s RCRAInfo user ID and password into the USERID variable with the database name (to create the connection string). REPORT is simply the name of the report being run.

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Options for Putting Reports into Pre-production

Creating a Pre-production Account for Regional Testing

This first option is a little more complex than the second. But it definitely has advantages for the Regions (and their States, of course) that plan to create more than a couple of reports for potential national use.

Steps

1. Ask the ADP coordinator for your Region to set up an account on EPA's Valley UNIX server.
2. Ensure your TSSMS user ID has access to this new account. The TSSMS account manager for your Region does this for you.
3. Inform OSW's designated report person(s) that you have an account that needs to be included in the path variable of the RCRAINTQ3 report queue.
4. **OSW Only**: if the Region has an existing directory set up in the path variable, please remove it to avoid any conflicts.
5. The user(s) that will be responsible for compiling the RDFs in the account should ensure that they have both a `prefs.ora` and a `.profile.personal` file in their `/home/TSSMS_ID` directory on the UNIX server. This is NOT the same directory where RDFs and the compile script (referenced below) will reside.

   The first file sets some basic Oracle information and necessary variables while the second must include the following two lines to set up Oracle variables and display a message indicating the command was successful upon logging onto the UNIX system.

   ```
   . /usr/opt/oracle/admin/develop60/dev2k6i.sh
   echo $ORACLE_HOME
   ```

6. Change your UNIX shell to Korn. This manual will not get into UNIX or different shells available. Suffice it to say that the command to use is:

   ```
   ch_sh TSSMS_ID /usr/bin/ksh
   ```

7. Finally, the user should copy the following file to the new account and modify the directory to which the path variable is set.

   ```
   /public/data/oswimb02/web/reports/scripts/compilerdf.sh
   ```

Using HQ to Start Pre-production Testing

Alternatively, you may submit the report RDF and hyperlink of the web page to OSW through the RCRAInfo Help Desk (rcrainfo.help@epa.gov) for performance testing. Please use the subject line "Report for Pre-production."

EPA will attempt to ensure that the report does not adversely affect system performance, *but we will not certify the results of the report*.

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Making Reports Available in Production

After successful performance testing by EPA, you will be told that the RDF is ready for your final testing. Please verify the interaction between your front end and the report and complete any testing or revisions that are necessary.

Upon final confirmation that EPA places the report into the production environment, you will be told to change your HTML front end to reflect the necessary production parameters. You should only need to change the following two lines (changes noted in bold text):

```
<input type="hidden" name="hidden_run_parameters" value="rcrausakey">
<input type="hidden" name="userid" value="userID/password@rcrainf">
```

Place your web page into production, and if this is your first shared report, EPA will create a hyperlink that points to your web server from within RCRAInfo's shared report dropdown boxes.

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Adding, Updating, and Deleting Reports

Adding or Updating Reports

If a developer wants to add another report or fix one currently in production, he must follow the above steps outlining the procedures to create a report and place it in production. Reports that are new or updated will not be placed into Production without a Region or State official certifying that the report has been tested in Pre-production.

Deleting Reports

If the developer wants to delete a report, he must submit an email to the rcrainfo.help@epa.gov Help Desk stating that the report should be deleted.

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Coding Tips for Report Developers

OSW does not provide support for HTML or other web software. There are other resources - books and web sites - that are far more helpful. This tip is provided to point developers in one of many possible directions to complete this initial phase of their project.

Creating the Connection String

This snippet of code creates the connection string by concatenating the value of “tssms” with the value of “password” and the database host string to create the “userid” that is passed to the report server.

```
<script language="javascript">
function submitForm()
{
document.forms[0].userid.value=document.forms[0].tssms.value+
                               '/'+document.forms[0].password.value+'@rcra';
document.forms[0].tssms.value='';
document.forms[0].password.value='';
document.forms[0].submit();
}
</script>
```

The information inside the HTML form looks something like this:

```
.
. more HTML
.
<tr>
  <td>Connection Info:</td>
  <td>
    User ID: <input name="tssms" size="10">
    Password: <input name="password" size="10" type="password">
    <input type="hidden" name="userid" value="ABC/password@rcrainf">
  </td>
</tr>
.
. more HTML
.
<tr>
  <td colspan=”2">
    <a href="javascript:submitForm();">Submit</a>
  </td>
</tr>
.
. more HTML
.
```

When the user clicks the submit hyperlink, the submitForm() JavaScript procedure is executed, and the “userid” parameter is created.

Notes about Forms and the Use of JavaScript

When creating forms that will use JavaScript – much as the previous example does – you must be aware of certain things: differences between browsers, conflicting elements in the official EPA Internet templates, etc.

Case Sensitivity

Unfortunately, JavaScript is case-sensitive. Beware of this!

Netscape vs. Internet Explorer

Web browsers are often built by competing software providers. Take Microsoft and Netscape for example. Each has built a widely popular browser that remains free to the public. While EPA may dictate that one browser may be the "Agency standard," we should be aware that other agencies and offices might be using the competing product. Therefore, we should attempt to make JavaScript functions that are compliant to the common standards of major browsers.

Forms and the EPA Internet Template

The latest version of the EPA's Dreamweaver Internet template already has a form in it that is used for the search engine. This is a force to be reckoned with because if you insert the code from previous examples into your page, you may experience problems in executing the report.

The reason for any problems may be explained by the following:

1. The web browser acts like a programming array when it encounters forms in an HTML page. The first form is granted the "0" element while subsequent forms are known as "1," "2," and so forth. In the EPA template, the search engine occupies the first position in the array. Therefore, when you refer to

2. If you've referenced your form elements with `document.forms[0]` then you are attempting to work with forms elements that may not exist in the EPA's search engine form. You should use the logical number of the array ("1," "2," or so forth) or the name of the form (`document.paramForm`) if you've assigned it one (please reference any HTML book for information on how to name your form).